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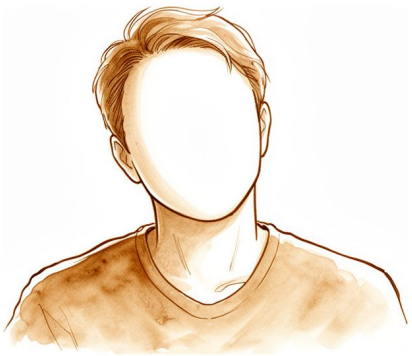
PATIENT INFORMATION — IN DEPTH

Mind, Stress and Recovery



Mind, Stress and Recovery

Kieran Hirpara

Pain and mood travel together. Anyone who has had a bad week and noticed their shoulder hurting more already knows this. It does not mean the pain is imagined, and it does not mean it is your fault. It means the nervous system that carries pain and the part of you that worries are the same system, and it is worth understanding how they interact before an operation rather than discovering it afterwards.

What stress does to pain

Think of your nervous system as an alarm. Its job is to tell you when something is wrong. In a calm, rested body the alarm is sensitive but accurate: a real injury sets it off, ordinary movement does not.

When you have been in pain for months, sleeping badly, or under strain at home or at work, the alarm gets turned up. It starts going off for things that are not dangerous: a light touch, a small movement, the weight of a blanket. The pain is real, but it is now bigger than the injury causing it. Doctors call this central sensitisation. In plain terms, the wiring has become over-sensitive, and worry, poor sleep and fear all turn the dial further.

This is why two people with the same operation, done the same way, can have very different first weeks. The repair is the same; the alarm settings are not.

Why it matters for your operation

If you are living with anxiety or low mood, your recovery is likely to follow a different path from the textbook one. You will probably report more pain in the early weeks, and your scores on the questionnaires we use may climb more slowly. You will still get most of the benefit of the operation; you may just feel it later, and feel less sure of it along the way.

Two specific things deserve a mention:

- **Fear of moving the arm** is the single thing most likely to hold a recovery back. It is completely understandable. The arm hurts, it has just been operated on, and moving it feels like it must be doing harm.

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But a repair that is not moved stiffens, and stiffness is much harder to undo than it is to prevent. The exercises you are given are the treatment, not an optional extra.

- **Worry that starts after surgery** is worth telling us about. People who become newly anxious or low in the weeks after a shoulder operation are more likely to end up back in hospital, usually over pain they were not expecting. Expecting it, and having a plan for it, is most of the answer.

None of this changes whether you should have the operation. It changes how we prepare you for it.

The habit that helps most: moving, gently, every day

The exercises from your surgeon or hand therapist are deliberately small and deliberately boring. They are meant to be done several times a day, within the limits you have been given, whether or not you feel like it. Some tips that make it easier:

- **Do them by the clock, not by how you feel.** Tie them to something you already do: after each meal, or each time you make a cup of tea.
- **Expect some discomfort and know the difference.** A stretch that eases as you settle into it is fine. Sharp pain that gets worse, or pain that stays raised for hours afterwards, is not, and means you should ease off and let us know.
- **Rehearse the movement in your head.** Sitting quietly and imagining the wrist bending, in detail, several times a day, sounds odd, but it has been shown to improve movement, grip and function after a wrist fracture [10]. The brain practises the movement even when the joint cannot yet. Try it before each set of exercises.
- **Keep the rest of you moving.** Walk every day. The arm is in a sling; you are not.

Simple things that help

- **Protect your sleep.** Poor sleep and pain feed each other, and after shoulder surgery in particular sleep is hard. The sleep, pain and recovery page has practical steps.
- **Use your pain relief as prescribed** in the first days, rather than waiting until pain is severe and then chasing it. See managing pain after surgery.
- **Keep a routine.** Get up at the usual time, get dressed, eat at normal times. Days without shape are days when pain fills the space.
- **Listen to music you like.** This is not a platitude. In a randomised trial, patients who had music therapy during shoulder replacement surgery had a greater fall in pain and anxiety scores than those who did not [11]. Headphones in the waiting area and at home cost nothing.
- **Slow breathing.** Four seconds in, six seconds out, for a couple of minutes, several times a day and whenever pain spikes. It is the quickest way to turn the alarm down a notch.

- **Stay connected.** Being one-handed is isolating. Say yes to visits and lifts, and let people help with the things that need two hands.
- **Go easy on alcohol and caffeine**, both of which make sleep worse and anxiety louder.
- **Judge progress over weeks, not days.** Recovery is not a straight line. A bad day in week three is not a failed operation.

If you already live with anxiety or depression

Tell us. It is common, it is not a reason to avoid surgery, and knowing about it lets us plan around it.

- **Keep taking your medication.** Do not stop antidepressants or anxiety medication before surgery unless the doctor who prescribed them tells you to. Stopping suddenly makes the days around an operation harder.
- **Line up your supports before the day.** If you see a psychologist or counsellor, let them know your surgery date. If you do not, and you would like to, your GP can arrange it.
- **Treating the anxiety helps the arm.** In patients with anxiety or depression having a rotator cuff repair, treating the mood problem in the weeks around surgery improved not only distress but also shoulder movement and function in the first three months [12]. Your mind and your shoulder are not separate projects.

When to seek help

Call the rooms if:

- pain is far worse than you were told to expect, or is not improving at all by the time you were told it should
- you find yourself unable to do your exercises because of fear rather than because of pain
- you notice new anxiety or low mood after your operation that is not lifting

See your GP if low mood or worry lasts more than a couple of weeks, if you are not sleeping at all, or if you have stopped doing the things you normally enjoy.

If you have thoughts of harming yourself, do not wait for an appointment. Call Lifeline on **13 11 14**, any time, or **000** in an emergency.

In more depth

This section is for the reader who wants the evidence rather than the summary. The research on mind and orthopaedic recovery has grown quickly, and the honest picture is more nuanced, and more hopeful, than "anxious people do worse".

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MENTAL HEALTH SHAPES WHERE YOU START, NOT ONLY WHERE YOU FINISH

In patients undergoing revision rotator cuff repair, pre-operative mental health status showed the strongest association of any factor with baseline pain, function and satisfaction scores, before anything had been operated on [1]. That matters for interpreting everything that follows: if you begin from a lower score, a smaller final score can still represent the same amount of improvement.

ANXIETY AND DEPRESSION CHANGE THE PATH, LESS SO THE DESTINATION

A prospective cohort study of hip replacement found that anxiety and depression symptoms were associated with inferior outcomes, with recovery trajectories that differed from those of patients without such symptoms, despite major clinical improvement in both groups [2]. After patellar stabilisation surgery, patients with major depressive disorder, or with depression that had never been diagnosed, reported worse scores before and after surgery, but still benefited significantly from the operation [3]. At two years after hip arthroscopy, a history of anxiety or depression was consistently associated with poorer patient-reported outcomes, whereas resilience showed a weaker and less consistent association [4].

The repeated pattern is a shifted curve rather than a flat one: the benefit is real, and it is measured from a lower starting point.

IT IS NOT A RULE

Two upper-limb studies push back on any simple story. After thumb base arthroplasty, a history of depression did not appear to worsen patient-reported outcomes [5]. And in surgery for painful nerve endings (neuromas) in the arm, patients with lower pre-operative mental health scores reported similar or greater improvements in pain, and similar improvements in function, to everyone else [6]. Mood is a factor, not a verdict.

THE MODIFIABLE PART IS FEAR OF MOVEMENT

The psychological factor with the clearest mechanical consequence is kinesiophobia, the fear that movement will cause harm. After arthroscopic stabilisation of a dislocating shoulder, kinesiophobia adversely affected functional recovery and return to sport [7]. A related trait, pain catastrophising (the habit of expecting the worst from pain), predicted dissatisfaction six months after spinal surgery [8]. And in the weeks after arthroscopic shoulder stabilisation, patients who developed new anxiety or depression had a significantly higher risk of readmission within 90 days [9].

These are the findings behind the advice on this page to move by the clock, to expect discomfort, and to tell us about new worry rather than sit on it.

WHAT ACTUALLY HELPS, TESTED PROPERLY

Three properly randomised comparisons are worth knowing about. Adding motor imagery (structured mental rehearsal of the movement) to standard treatment after a distal radius fracture improved function, wrist extension and grip strength compared with standard treatment alone [10]. Music therapy during shoulder replacement produced a significantly greater reduction in pain and anxiety scores than usual care [11]. And in patients with anxiety or depression undergoing rotator cuff repair, treatment with duloxetine, an

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antidepressant also used for pain, improved anxiety and distress and also range of motion and functional scores over the first three months, at the cost of nausea or vomiting in about one patient in six [12].

None of these is a cure and the last is a prescribing decision for your GP or psychiatrist, not something to start yourself. But together they show the same thing from three directions: the mind is not a bystander in recovery, and it can be worked with.

A NOTE ON THE QUESTIONNAIRES

You may be asked to fill in a short mental health questionnaire before surgery. This is not a test you can fail. A study comparing screening tools before joint replacement found that a brief standard mental health score performed better than a resilience questionnaire at identifying patients at risk of a poorer result [13]. The point of asking is to plan support, not to decide who is operated on.

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